

REMARKS

Applicants acknowledge receipt of the Examiner's Final Office Action dated December 22, 2006. This Office Action rejects all claims. Specifically, Claims 1, 4-10, 12, and 15-21 were rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent Application Publication No. 2005/0154845 filed by Shackelford et al. ("Shackelford"). Claims 2, 3, 11, 13, 14 and 22 were rejected under 35 U.S.C. §103 as being obvious over Shackelford in view of U.S. Patent No. 6,222,558 issued to Berg ("Berg"). In light of the following remarks, Applicants respectfully request the Examiner's reconsideration and reexamination of all pending claims.

Dependent Claim 1 recites:

A method comprising:

creating a first storage object, wherein creating the first storage object comprises creating a first storage object description, wherein the first storage object description comprises data that relates the first storage object to first underlying storage objects or to first physical memory regions;

creating a second storage object as a virtual snapshot copy of the first storage object, wherein creating the second storage object comprises creating a second storage object description, wherein the second storage object description comprises data identifying the second storage object as a snapshot copy of the first storage object;

adding to the first storage object description data identifying the second storage object as a snapshot copy of the first storage object;

transmitting the first storage object description to a first computer system, and;

transmitting the second storage object description to a second computer system.

Independent Claim 1 recites the acts of transmitting the first storage object description to a first computer system, where the first storage object description comprises "data that relates the first storage object to first underlying storage objects or to first physical memory regions." The Office Action asserts on page 3 that "data that relates the first storage object to first underlying storage objects or to first physical memory regions" equates to the mapping taught in paragraph [0034] of Shackelford.

Paragraph [0034] of Shackelford recites:

[0034] In certain embodiments, the replication management application 112 maintains consistency of data updates received from the application system 104, where the data updates are asynchronously copied to the secondary storage control 102 from the primary storage control 100. The replication management application 112 may perform a virtualization of the secondary storage 108 that is coupled to the secondary storage control 102 to maintain the consistency of data across the primary storage control 100 and the secondary storage control 102. In certain embodiments, virtualization includes the mapping of the physical secondary storage 108 to virtual volumes.

While the foregoing states that virtualization includes the mapping of the physical secondary storage 108 to virtual volumes, the foregoing does not state that the virtual volumes include the mappings.

As noted above, independent Claim 1 requires transmitting the first storage object description (which includes data that relates the first storage object to first underlying storage objects or to first physical memory regions) to a first computer system. The Office Action on page 4 asserts “storing” virtual volumes 206 is the same as claim 1’s requirement of transmitting the first storage object description. However, the Office Action does not assert the virtual volumes 206 comprise the mappings of paragraph [0034], which were equated with claim 1’s data that relates the first storage object to first underlying storage objects or to first physical memory regions. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. The elements must be arranged as required by the claim. MPEP 2131. To anticipate independent Claim 1, the Office Action must allege the virtual volumes 206 include the mappings of paragraph [0034] before the Office Action can assert that storing virtual volumes is the same as transmitting the first storage object description which comprises data that relates the first storage object to first underlying storage objects or to first physical memory regions. The Office Action fails to make this allegation; accordingly the rejection of independent Claim 1 lacks a *prima facie* basis.

Independent Claim 6 has been amended to incorporate the limitations of dependent Claim 7. Independent Claim 6 now recites transmitting the first and second storage object descriptions to first and second computer systems, respectively. Claim 6 also recites the act of adding data to a description for the first storage object to indicate that the first storage object is related to the second storage object. In rejecting claim 7 the Office Action on page 5 asserts “storing” virtual volumes 206 is the same as claim 7’s requirement of transmitting the first storage object description. However, the Office Action does not assert virtual volumes 206 includes data indicating the first storage object is related to the second storage object. For reasons similar set forth above with respect to Claim 1, Applicants assert that independent Claim 6, as amended, is patentably distinguishable over the cited sections of Shackelford.

Independent Claim 12, like independent Claim 1, recites transmitting first and second storage object descriptions to first and second computer systems, respectively. For the same reasons that independent Claim 1 has been shown to be patentably distinguishable over the cited sections of Shackelford, it follows that independent Claim 12 is likewise patentably distinguishable. Lastly, independent Claim 17 has been amended to incorporate the limitations of dependent Claim 18. Independent Claim 17 as amended, recites transmitting the first and second storage object descriptions to first and second computer systems, respectively. For the same reasons that independent Claim 6 has been shown to be patentably distinguishable over the cited sections of Shackelford, it follows that independent Claim 17 is likewise patentably distinguishable.

CONCLUSION

Applicant submit that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AE, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on 2/26/07

  
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2/26/07  
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Respectfully submitted,



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